

CLAIMS

1. A method for the treatment of malignant tumor which comprises performing donor leukocyte infusion in a
5 patient requiring such treatment and then performing radiation treatment (irradiation), infusion of lymphocytes derived from the host or a third party identical in HLA type to the host, and intra bone marrow-bone marrow transplantation using bone marrow cells
10 derived from the host or a third party identical in HLA type to the host.
2. The method for the treatment of malignant tumor as defined in Claim 1, wherein the donor lymphocyte infusion is for graft versus tumor reaction-based tumor treatment,
15 and the radiation treatment, infusion of lymphocytes derived from the host or a third party identical in HLA type to the host and intra bone marrow-bone marrow transplantation using bone marrow cells derived from the host or a third party identical in HLA type to the host
20 are for the prevention and treatment of the graft versus host disease induced by said donor lymphocyte infusion.
3. The method for the treatment of malignant tumor as defined in Claim 1, wherein a further radiation treatment is performed prior to donor lymphocyte infusion.
- 25 4. The method for the treatment of malignant tumor as

defined in Claim 1, wherein the donor lymphocyte infusion is performed in the manner of intravenous administration of an effective amount of donor-derived peripheral blood mononuclear cells.

5 5. The method for the treatment of malignant tumor as defined in Claim 1, wherein the radiation treatment following the donor lymphocyte infusion is performed in the manner of total body irradiation at a dose of 3-4 Gy.

6. The method for the treatment of malignant tumor as
10 defined in Claim 1, wherein the infusion of lymphocytes derived from the host or a third party identical in HLA type to the host is performed in the manner of intravenous administration of an effective amount of peripheral blood mononuclear cells derived from the host
15 or a third party identical in HLA type to the host.

7. The method for the treatment of malignant tumor as defined in Claim 1, wherein the bone marrow cells are whole bone marrow cells derived from the host or a third party identical in HLA type to the host.

20 8. The method for the treatment of malignant tumor as defined in Claim 1, wherein the bone marrow cells are whole bone marrow cells obtained by inserting a bone marrow puncture needle into one end of a long bone of the host or a third party identical in HLA type to the host,
25 causing an irrigating fluid to flow via the needle

through the medullary cavity and recovering the irrigating fluid containing bone marrow cells from a perforation provided at the other end of the long bone.

9. The method for the treatment of malignant tumor as defined in Claim 1, wherein the intra bone marrow-bone marrow transplantation is performed in the manner of administration, into a long bone, of an effective amount of whole bone marrow cells derived from the host or a third party identical in HLA type to the host.
10. A method for the treatment of malignant tumor which comprises performing donor lymphocyte infusion for graft versus tumor reaction-based tumor treatment in a patient to be treated and then performing radiation treatment and intravenous administration of peripheral blood stem cells derived from the host or a third party identical in HLA type to the host for the prevention and treatment of the graft versus host disease caused by said donor lymphocyte infusion.
11. The method for the treatment of malignant tumor as defined in Claim 1, wherein the malignant tumor is selected from among leukemia, malignant lymphoma, multiple myeloma, sarcoma, melanoma, brain tumor, stomach cancer, tongue cancer, esophageal carcinoma, colorectal cancer, liver cancer, gallbladder carcinoma, pancreatic carcinoma, renal carcinoma, bladder cancer,

nasopharyngeal cancer, laryngeal cancer, skin cancer, mammary cancer, testicular cancer, ovarian cancer, uterus carcinoma, and lung cancer.

12. A pharmacological composition for use in the
5 malignant tumor treatment method as defined in Claim 1 which comprises (1) a composition containing donor-derived peripheral blood mononuclear cells, (2) a composition containing peripheral blood mononuclear cells derived from the host or a third party identical in HLA
10 type to the host and (3) a composition containing whole bone marrow cells derived from the host or a third party identical in HLA type to the host.

13. A method for the prevention and treatment of the graft versus host disease induced by donor lymphocyte
15 infusion which comprises performing, in a patient to be treated for the prevention and treatment of the graft versus host disease, radiation treatment, infusion of lymphocytes derived from the host or a third party identical in HLA type to the host and intra bone marrow-
20 bone marrow transplantation using bone marrow cells derived from the host or a third party identical in HLA type to the host.

14. A pharmacological composition for use in the method for the prevention and treatment of the graft versus host
25 disease induced by donor lymphocyte infusion as defined

in Claim 13 which comprises (1) a composition containing peripheral blood mononuclear cells derived from the host or a third party identical in HLA type to the host and (2) a composition containing whole bone marrow cells
5 derived from the host or a third party identical in HLA type to the host.